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#### (54) SYSTEMS AND METHODS FOR AVOIDING NEURAL STIMULATION HABITUATION

## (71) Applicant: Cardiac Pacemakers, Inc., St. Paul,

MN (US)

#### (72) Inventors: Imad Libbus, St. Paul, MN (US);

Andrew P. Kramer, Marine on St.

Croix, MN (US)

#### (73) Assignee: Cardiac Pacemakers, Inc., St. Paul,

MN (US)

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#### (58) Field of Classification Search

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Primary Examiner — George Manuel (74) Attorney, Agent, or Firm — Schwegman Lundberg & Woessner, P.A.

#### (57) ABSTRACT

An embodiment relates to a method for delivering a vagal stimulation therapy to a vagus nerve, including delivering a neural stimulation signal to non-selectively stimulate both afferent axons and efferent axons in the vagus nerve according to a predetermined schedule for the vagal stimulation therapy, and selecting a value for at least one parameter for the predetermined schedule for the vagal stimulation therapy to control the neural stimulation therapy to avoid physiological habituation to the vagal stimulation therapy. The parameter(s) include at least one parameter selected from the group of parameters consisting of a predetermined therapy duration parameter for a predetermined therapy period, and a predetermined intermittent neural stimulation parameter associated with on/off timing for the intermittent neural stimulation parameter.

#### 20 Claims, 11 Drawing Sheets

